Amendment

Amendment to Claims

Claim 1 (Amended): A method of transmitting data through a mesh of data switches, the method comprising:

receiving a data frame at a first port of a ~~first~~ receiving data switch, the data frame originating at a first MAC device and having a destination address associated with a second MAC device, the second MAC device being associated with a destination data switch in the mesh;

maintaining a data structure associating each of a plurality of destination addresses of discovered MAC devices with one of a port and an aggregation of ports on the receiving data switch;

comparing the destination address of the received data frame with the data structure to determine a match with one of a port and aggregation of ports;

transmitting the received data frame through the mesh of data switches according to a spanning tree protocol if no match is determined;

~~associating the destination address with one of a single port and an aggregation of ports of the first data switch, each port in the aggregation of ports providing a data path through the mesh of data switches to the destination data switch; and~~

selecting ~~a port~~ one of the ports in the aggregation of ports for transmitting the received data frame to the destination data switch if the destination address is associated with ~~an~~ the aggregation of ports.

Claim 2 (original): The method of claim 1, the method further comprising:

associating the destination address with the destination data switch; and

determining the associated port or aggregation of ports based upon the

destination data switch.

Claim 3 (original): The method of claim 1, the method further comprising

selecting a port in the aggregation of ports for transmitting the data frame based upon

one of the destination address and a source address of the data frame associated with

the first MAC device.

Claim 4 (Cancelled).

Claim 5 (Amended): The method of claim 4 1, the method further comprising:

receiving a message at the receiving data switch specifying a destination data

switch associated with the destination address of the second data frame;

associating in the data structure the destination address of the second data frame

with a transmitting port on the receiving data switch; and

suspending a transition for transmission of subsequent data frames to the third

MAC device through a data path including the transmitting port to ensure a delay from a

transmission of a last data frame according to the spanning tree protocol to a

transmission of a first data frame through the data path.

Claim 6 (Amended): ~~The~~ A method of ~~claim 1~~ transmitting data through a mesh

of data switches, the method ~~further~~ comprising:

receiving a data frame at a first port of a receiving data switch, the data frame

originating at a first MAC device and having a destination address associated with a

second MAC device and a source address associated with the first MAC device, the

second MAC device being associated with a destination data switch in the mesh;

maintaining a data structure associating each of a plurality of discovered MAC

device addresses with a destination data switch in the mesh;

~~receiving a second data frame originating at a third MAC device on a receiving~~

~~port of the first data switch, the second data frame having a source address associated~~

~~with the third MAC device;~~

comparing the source address of the ~~second~~ received data frame with the data

structure to determine a match with a destination data switch; and

if no match is determined, transmitting a message to at least one other data

switch in the mesh specifying the ~~first~~ receiving data switch as a destination data switch

of the ~~third~~ first MAC device.

Claim 7 (Amended): A source data switch for transmitting data frames through a

mesh of data switches, the source data switch comprising:

a switching fabric including a plurality of ports;

logic to maintain a data structure associating each of a plurality of destination

addresses of discovered MAC devices coupled to a mesh of data switches with one of a

port and an aggregation of ports of the switching fabric, each port in the aggregation of

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ports coupling to a data path through the mesh of switches to a MAC device having the destination address; ~~and~~

logic to compare the destination address of the received data frame with the data structure to determine a match with a port or aggregation of ports;

logic to select ~~a port~~ *one of the ports* from among an aggregation of ports for transmitting *the* ~~a~~ data frame received at the switching fabric if a *the* destination address of received data frame ~~is associated with~~ is matched with the aggregation of ports; and

logic to transmit the received data frame through the mesh of data switches according to a spanning tree protocol if no match is determined.

Claim 8 (original): The source data switch of claim 7, the source data switch further comprising:

logic to associate the destination address of the received data frame with a destination data switch; and

logic to select ~~a port~~ *one of the ports* from the aggregation of ports based upon the destination data switch for transmission of the received data frame.

Claim 9 (original): The source data switch of claim 7, the source data switch further comprising logic to select ~~a port~~ *one of the ports* in the aggregation of ports for transmission of the received data frame based upon one of *the* ~~a~~ destination address and *the* ~~a~~ source address of the received data frame.

Claim 10 (Cancelled).

Claim 11 (Amended): The source data switch of claim ~~10~~ 7, the source data

switch further comprising:

logic to receive a message specifying a destination data switch associated with

the destination address of the received data frame;

logic to associate in the data structure the destination address of the received

data frame with a transmitting port of the switching fabric based upon the destination

data switch; and

logic to suspend a transition for transmission of subsequent data frames to the

destination address through a data path including the transmitting port to ensure a delay

from a transmission of a last data frame according to the spanning tree protocol to a

transmission of a first data frame through the data path.

Claim 12 (Amended): ~~The~~ A source data switch ~~of claim 7~~, the source data

switch ~~further~~ comprising:

a switching fabric including a plurality of ports;

logic to maintain a data structure associating each of a plurality of destination

addresses of discovered MAC devices coupled to a mesh of data switches with one of a

port and an aggregation of ports of the switching fabric, each port in the aggregation of

ports coupling to a data path through the mesh of switches to a MAC device having the

destination address;

logic to compare the source address of ~~the~~ a received data frame with the data

structure to determine a match with a destination data switch; and

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logic to initiate transmission of a message to at least one data switch in the mesh specifying a data switch hosting the switching fabric as a destination data switch for data frames having a destination address corresponding with the source address of the received data frame if no match is determined.

Claim 13 (Amended): A data switch controller comprising:

an interface adapted for coupling to a switching fabric, the switching fabric including a plurality of ports;

logic to maintain a data structure associating each of a plurality of destination addresses of discovered MAC devices coupled to a mesh of data switches with one of a port and an aggregation of ports of the switching fabric, each port in the aggregation of ports coupling to a data path through the mesh of switches to a MAC device having the destination address; and

logic to compare the destination address of the received data frame with the data structure to determine a match with a port or aggregation of ports;

logic to select a port from among an aggregation of ports for transmitting a data frame received at the switching fabric if a the destination address of the received data frame is associated with is matched with the aggregation of ports; and

logic to transmit the received data frame through the mesh of data switches according to a spanning tree protocol if no match is determined.

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Claim 14 (original): The data switch controller of claim 13, the data switch

controller further comprising:

logic to associate the destination address of the received data frame with a

destination data switch; and _said of the ports_

logic to select ~~a port~~ from the aggregation of ports based upon the destination

data switch for transmission of the received data frame.

Claim 15 (original): The data switch controller of claim 13, the data switch

controller further comprising logic to select ~~a port~~ _said one of the ports_ in the aggregation of ports for

transmission of the received data frame based upon one of a destination address and a

source address of the received data frame.

Claim 16 (Cancelled).

Claim 17 (Amended): The data switch controller of claim ~~16~~ 13, the data switch

controller further comprising:

logic to receive a message specifying a destination data switch associated with

the destination address of the received data frame;

logic to associate in the data structure the destination address of the received

data frame with a transmitting port of the switching fabric based upon the destination

data switch; and

logic to suspend a transition for transmission of subsequent data frames to the

destination address through a data path including the transmitting port to ensure a delay

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from a transmission of a last data frame according to the spanning tree protocol to a

transmission of a first data frame through the data path.

Claim 18 (Amended):   ~~The~~ A data switch controller ~~of claim 13~~, the data

switch controller ~~further~~ comprising:

logic to maintain a data structure associating each of a plurality of destination

addresses of discovered MAC devices coupled to a mesh of data switches with one of a

port and an aggregation of ports of a switching fabric, each port in the aggregation of

ports coupling to a data path through the mesh of switches to a MAC device having the

destination address;

logic to compare the source address of ~~the~~ a received data frame with the data

structure to determine a match with a destination data switch; and

logic to initiate transmission of a message to at least one data switch in the mesh

specifying a data switch hosting the switching fabric as a destination data switch for

data frames having a destination address corresponding with the source address of the

received data frame if no match is determined.

Claim 19 (Amended):   A data network for transmitting data frames from a

source MAC device to a destination MAC device, the data network comprising:

a destination data switch coupled to a destination MAC device;

a mesh of data switches coupled to the destination data switch for transmitting data

frames originating at a source MAC device to the destination MAC device; and

a source data switch coupled to the source MAC device including:

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a switching fabric including a plurality of ports;

logic to maintain a data structure associating each of a plurality of destination

addresses of <u>discovered</u> MAC devices coupled to ~~a~~ <u>the</u> mesh of data switches with one

of a port and an aggregation of ports of the switching fabric, each port in the

aggregation of ports coupling to a data path through the mesh of switches to a MAC

device having the destination address; ~~and~~

<u>logic to compare the destination address of the received data frame with the data</u>

<u>structure to determine a match with a port or aggregation of ports;</u>

logic to select a port from among an aggregation of ports for transmitting a data

frame received at the switching fabric if ~~a~~ <u>the</u> destination address of received data frame

~~is associated with~~ <u>is matched with</u> the aggregation of ports<u>; and</u>

<u>logic to transmit the received data frame through the mesh of data switches</u>

<u>according to a spanning tree protocol if no match is determined</u>.

Claim 20 (original): The data network of claim 19, wherein the source data

switch further comprises:

logic to associate the destination address of the received data frame with a

destination data switch; and

logic to select a port from the aggregation of ports based upon the destination

data switch for transmission of the received data frame.

Claim 21 (original): The data network of claim 19, wherein the source data

switch further comprises logic to select a port in the aggregation of ports for

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transmission of the received data frame based upon one of a destination address and a source address of the received data frame.

Claim 22 (Amended): The data network of claim 7 19, the source data switch further comprising:

logic to compare the destination address of the received data frame with the data structure to determine a match with a port or aggregation of ports; and

logic to initiation transmission of the received data frame through the mesh of data switches according to a spanning tree protocol if no match is determined.

Claim 23 (original): The data network of claim 22, wherein the source data switch further comprises:

logic to receive a message specifying a destination data switch associated with the destination address of the received data frame;

logic to associate in the data structure the destination address of the received data frame with a transmitting port of the switching fabric based upon the destination data switch; and

logic to suspend a transition for transmission of subsequent data frames to the destination address through a data path including the transmitting port to ensure a delay from a transmission of a last data frame according to the spanning tree protocol to a transmission of a first data frame through the data path.

Claim 24 (Amended):   ~~The~~ A data network ~~of claim 19, wherein the source~~

~~data switch further comprises~~ the data network comprising:

a destination data switch coupled to a destination MAC device;

a mesh of data switches coupled to the destination data switch for transmitting data

frames originating at a source MAC device to the destination MAC device; and

a source data switch coupled to the source MAC device including:

a switching fabric including a plurality of ports;

logic to maintain a data structure associating each of a plurality of

destination addresses of discovered MAC devices coupled to the mesh of data

switches with one of a port and an aggregation of ports of the switching fabric,

each port in the aggregation of ports coupling to a data path through the mesh of

switches to a MAC device having the destination address;

logic to compare the source address of ~~the~~ a received data frame with the

data structure to determine a match with a destination data switch; and

logic to initiate transmission of a message to at least one data switch in the

mesh of data switches specifying a data switch hosting the switching fabric as a

destination data switch for data frames having a destination address corresponding

with the source address of the received data frame.

Claim 25 (Amended): An article comprising:

a storage medium comprising machine-readable instructions stored thereon for:

maintaining a data structure associating each of a plurality of destination

addresses of discovered MAC devices with one of a port and an aggregation of

ports of a receiving data switch;

detecting receipt of a data frame at a first port of a switching fabric, the

switching fabric having a plurality of ports, the data frame having a destination

address associated with a destination MAC device coupled to the switching fabric

through a mesh of data switches at a destination data switch;

comparing the destination address of the received data frame with the

data structure to determine a match with one of a port and aggregation of ports;

transmitting the received data frame through the mesh of data switches

according to a spanning tree protocol if no match is determined;

associating the destination address with one of a single port and an

aggregation of ports of the switching, each port in the aggregation of ports

providing a data path through the mesh of data switches to the destination data

switch; and

selecting a port in the aggregation of ports for transmitting the data frame

to the destination data switch if the destination address is associated matched

with an the aggregation of ports.

Claim 26 (original): The article of claim 25, wherein the storage medium further

comprises machine-readable instructions stored thereon for:

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associating the destination address of the received data frame with a destination

data switch; and

selecting a port from the aggregation of ports based upon the destination data

switch for transmission of the received data frame.

Claim 27 (original): The article of claim 25, wherein the storage medium further

comprises machine-readable instructions stored thereon for selecting a port in the

aggregation of ports for transmission of the received data frame based upon one of a

destination address and a source address of the received data frame.

Claim 28 (amended): The article of claim 25, wherein the storage medium

further comprises machine-readable instructions stored thereon for:

associating the destination address of the received data frame with ~~with~~ a port or

aggregation of ports to determine a match; and

initiating transmission of the received data frame through the mesh of data

switches according to a spanning tree protocol if no match is determined.

Claim 29 (original): The article of claim 28, wherein the storage medium further

comprises machine-readable instructions stored thereon for:

receiving a message specifying a destination data switch associated with the

destination address of the received data frame;

associating in a data structure the destination address of the received data frame with a transmitting port of the switching fabric based upon the destination data switch; and

suspending a transition for transmission of subsequent data frames to the destination address through a data path including the transmitting port to ensure a delay from a transmission of a last data frame according to the spanning tree protocol to a transmission of a first data frame through the data path.

Claim 30 (Amended): ~~The article of claim 25, wherein the~~ An article comprising: a storage medium ~~further comprises~~ comprising machine-readable instructions stored thereon for:

maintaining a data structure associating each of a plurality of discovered MAC device addresses with a destination data switch in a mesh of data switches;

comparing the source address of a data frame originating at a MAC device and received at a receiving data switch with the data structure to determine a match with a destination data switch; and

if no match is determined, transmitting a message to at least one other data switch in the mesh specifying the receiving data switch as the destination data switch of the MAC device

~~associating the source address of the received data frame with a destination data switch to determine a match; and~~

~~initiating transmission of a message to at least one data switch in the mesh specifying a data switch hosting the switching fabric as a destination data switch for~~

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~~data frames having a destination address corresponding with the source address of the~~

~~received data frame~~.